

ABSTRACT OF THE DISCLOSURE

A solder mask manufacturing method adapted to apply a solder mask on a surface of a substrate of a circuit board, said surface is provided with a conductor pattern having an unsheltered portion and a sheltered portion which is covered by said solder mask. The method comprises the steps of: a) disposing a layer of semi-solid solder mask material having an expansion coefficient substantially the same as that of the substrate on the surface of said substrate to cover said copper conductor pattern, and a metal foil covering the material layer; b) applying pressure to the metal foil and applying baking treatment to cure the solder mask material in to solid; c) utilizing chemical solution and plasma etching to remove the metal foil and the solid solder mask material above the unsheltered portion of said copper conductor pattern respectively such that the unsheltered portion can be exposed; and d) using chemical solution to remove the residual metal foil.